

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

- 1 1. (currently amended) A method of forming a linear photosensor array, comprising:
2 forming a plurality of integrated circuits each including
3 a linear array of photosensors formed in a line along a length of the integrated circuit
4 within a portion of the integrated circuit remaining exposed after packaging, and
5 a plurality of conductive leads adapted for soldering to a circuit board;
6 mounting the integrated circuits with the portions containing the photosensors in alignment
7 on a circuit board; and
8 soldering at least some of the leads for each integrated circuit to the circuit board.
- B1

1 2. (currently amended) The method of claim 1, ~~wherein the step of forming a plurality of~~
2 ~~integrated circuits each including a linear array of photosensors within a portion of the integrated~~
3 ~~circuit remaining exposed after packaging and a plurality of conductive leads adapted for soldering~~
4 ~~to a circuit board further comprises comprising:~~

5 packaging each of the plurality of integrated circuit packages by:

6 affixing an integrated circuit die to a lead frame;

7 connecting the integrated circuit die to selected portions of the lead frame with bond

8 wires; and

9 encapsulating a portion of the lead frame and the integrated circuit die except for the
10 exposed region, wherein the exposed region of the integrated circuit die remains exposed to
11 external ambient light.

1 3. (currently amended) The method of claim 2, ~~wherein the step of encapsulating a portion of~~
2 ~~the lead frame and the integrated circuit die except for the exposed region, wherein the exposed~~
3 ~~region of the integrated circuit die remains exposed to external ambient light further comprises~~
4 comprising:

5 after affixing the integrated circuit die to the lead frame and connecting the bond wires,
6 mounting the lead frame with the integrated circuit die and bond wires in a mold with a portion of
7 the mold in contact with the exposed region of the integrated circuit die to prevent encapsulating
8 material from adhering to the exposed region of the integrated circuit die.

1 4. (currently amended) The method of claim 3, ~~wherein the step of mounting the lead frame~~
2 ~~with the integrated circuit die and bond wires in a mold with a portion of the mold in contact with~~
3 ~~the exposed region of the integrated circuit die to prevent encapsulating material from adhering to~~
4 ~~the exposed region of the integrated circuit die further comprises comprising:~~

5 mounting the lead frame with the integrated circuit die and bond wires in a mold having a
6 sloped surface adjacent to the portion of the mold contacting the exposed region of the integrated
7 circuit die, wherein the sloped surface forms one surface of a mold cavity receiving the bond wires
8 when the lead frame with the integrated circuit die is mounted in the mold.

1 5. (currently amended) The method of claim 1, wherein the step of forming a plurality of
2 integrated circuits each including a linear array of photosensors within a portion of the integrated
3 circuit remaining exposed after packaging and a plurality of conductive leads adapted for soldering
4 to a circuit board further comprises comprising:

5 mounting a plurality of integrated circuit die on a lead frame strip with a separation between
6 the mounted integrated circuit die approximately equal to a kerf width for a singulation saw to be
7 used in separating the packaged integrated circuits.

1 6. (currently amended) The method of claim 1, wherein the step of mounting the integrated
2 circuits with the portions containing the photosensors in alignment on a circuit board further
3 comprises comprising:

4 packaging the integrated circuits with the portion containing the photosensors exposed; and
5 mounting adjacent packaged integrated circuits in contact with each other.

1 7. (currently amended) The method of claim 1, wherein the step of soldering at least some of
2 the leads for each integrated circuit to the circuit board further comprises comprising:

3 soldering only leads on one side of each integrated circuit to the circuit board, leaving leads
4 on an other side of the packaged integrated circuits in floating contact with conductive structures on
5 the circuit board to facilitate adjustment and removal of integrated circuits.

1 8. (currently amended) An integrated circuit package for a linear photosensor array,
2 comprising:

a lead frame including a die paddle and a plurality of leads;

4 an integrated circuit die affixed to the die paddle, the integrated circuit die including a
5 plurality of photosensitive devices linearly aligned along a length of an upper surface of the
6 integrated circuit die; and

7 packaging material encapsulating a portion of the lead frame and the integrated circuit die
8 except for a region of the integrated circuit die containing the photosensitive devices, wherein the
9 region containing the photosensitive devices remains exposed through the packaging material.

1 9. (currently amended) The integrated circuit package of claim 8, wherein the die paddle of the
2 lead frame is shorter in length than the integrated circuit die.

1 10. (original) The integrated circuit package of claim 8, wherein the integrated circuit is affixed
2 to the lead frame with an adhesive.

1 11. (currently amended) The integrated circuit package of claim 8, wherein the packaging
2 material does not cover ends of the integrated circuit die.

1 12. (currently amended) The integrated circuit package of claim 8, further comprising:
2 bond wires connecting the integrated circuit die to selected portions of the lead frame,
3 wherein the packaging material encapsulates encapsulated the bond wires.

1 13. (original) A linear photosensor array, comprising:
2 a circuit board; and
3 a plurality of packaged integrated circuits mounted on the circuit board, wherein each
4 packaged integrated circuit includes an array of photosensors linearly aligned along a length of a
5 surface region of an integrated circuit die therein and a plurality of conductive leads adapted for
6 soldering to the circuit board,
7 wherein the packaged integrated circuits are mounted in a line on the circuit board with the
8 surface regions of each packaged integrated circuit in alignment, and
9 wherein at least some of the leads for each packaged integrated circuit are soldered to the
10 circuit board.

1 14. (currently amended) The linear photosensor array of claim 13, wherein the each of the
2 integrated circuit packages further comprises:

3 an integrated circuit die affixed to a lead frame;

4 bond wires connecting the integrated circuit die to selected portions of the lead frame; and

5 packaging encapsulating a portion of the lead frame, the integrated circuit die except for the
6 surface region containing the array of photosensors and ends of the integrated circuit die, and the
7 bond wires,

8 wherein the surface region of the integrated circuit die containing the array of photosensors
9 remains exposed to ambient light.

1 15. (original) The linear photosensor array of claim 13, wherein adjacent packaged integrated
2 circuits on the circuit board are mounted in contact with each other such that the array of
3 photosensors on each integrated circuit die form a single, long, continuous photosensor array.

1 16. (original) The linear photosensor array of claim 13, wherein only leads on one side of each
2 packaged integrated circuit mounted on the circuit board are soldered to the circuit board, while leads
3 on an other side of each packaged integrated circuit are left in floating contact with conductive
4 structures on the circuit board to facilitate adjustment and removal of packaged integrated circuits.

5 17. (currently amended) A mold for packaging integrated circuits, comprising:
6 a surface against which a lead frame strip may be placed, the surface including pins
7 projecting therefrom which are received by tooling holes within a lead frame strip placed against the

8 surface;

*B4
Plan X*
9 a plurality of cavity regions extending from the surface, each cavity region receiving an
10 integrated circuit die affixed to the lead frame strip and bond wires connecting the integrated circuit
11 die to the lead frame strip when the lead frame strip is placed against the surface, each cavity region
12 formed by:

13 a first surface contacting a surface region of the integrated circuit die over a plurality
14 of photosensors therein when the lead frame strip is placed against the surface and preventing
15 encapsulate material from adhering to the surface region of the integrated circuit die, and

16 a sloped surface extending from the first surface of the cavity to form an area
17 receiving the bond wires connecting the integrated circuit die to the lead frame strip when
18 the lead frame strip is placed against the surface.

1 18. (original) The mold of claim 17, wherein the plurality of cavity regions are contiguous and
2 form a single cavity.